Project Scoping Summary: #40408

Tornado Salvage and Restoration-related Activities: Compartments 96 and 99

The Project

The project involves salvage of dead and dying trees and restoration-related activities in fifteen (15) stands totaling an estimated 237 acres in Compartments 96 and 99 on the Poplar Bluff Ranger District, Mark Twain National Forest. These dead and dying trees are a result of a tornado event that occurred on April 24, 2004.

Purpose and Need

The purpose of the project is to salvage dead and dying trees that are a result of a tornado event, and reduce hazardous fuel-loading conditions.

Background

On April 24, 2004, a tornado cut a swath across an area north of the community of Ellsinore in Wayne County, Missouri an estimated 7 2/3 miles long, and 1/10 mile wide (See Vicinity Map). Maximum wind speeds were estimated at 150 miles per hour. The tornado injured several people, and knocked down power lines, destroyed several homes, and damaged timber resources on both private and National Forest System lands. Approximately 4/5 miles of the swath was on National Forest lands.

National Forest System lands that were affected were in Compartments 96 and 99. Thirteen (13) stands totaling an estimated 197 acres in Compartment 96 and two (2) stands totaling an estimated 40 acres in Compartment 99 received varying degrees of damage (Please refer to the attached table and separate project map for specific stand locations). Trees were up-rooted, tops broken off, and stems splintered in parts of the tornado-damaged area. In other parts within the tornado's path, damage was not as severe. Many of the trees affected by the tornado are now dead or dying, and therefore more susceptible to invasion by insects and disease, which can also affect other adjacent, and nearby otherwise healthy trees.

Tornado damage

This dead material contributes to increased fuel loading conditions. Conditions are now considered significantly higher than pre-tornado fuel-loading conditions. Normally, fuel loadings in the area are around 2 tons/acre. Under pre-tornado fuel conditions, heavy fuels existed, but in low quantities and scattered sparsely across the forest floor. When fire hit them, it usually did not ignite the entire log, and may have gone out entirely depending on how moist the log was.

The post-tornado fuels are in an almost continuous bed with a deep, loosely arranged mix of light, medium, and heavy fuels. All fuels on or near the ground are available to carry a fire. Under post-tornado conditions, these large logs could fully ignite because of the deeper, continuous layer of fuel now on the ground. Fuel load and depth are significant fuel properties for predicting a wildfire's rate of spread and intensity. Due

to the current fuel load, intensity builds up as the large fuels ignite. These large fuels exhibit sustained active flaming for long periods of time and produce numerous firebrands that could result in increased, long range spotting potential with higher wind speeds.

Such fuel conditions create the potential for severe forest fires that could have a significant effect on the health and safety of the public and firefighters. State and county roadways are at risk of receiving heavy smoke resulting in unsafe conditions for vehicles, and private property and the citizens who live near or visit the area are at risk. The ability to respond to and safely suppress potential fires is severely decreased by large fuel accumulations and the physical obstacles created by the downed trees.

The district is proposing to implement actions that will, over time, help reduce wildfire risks to acceptable levels, and restore these lands to more natural appearing forest.

These actions include:

- **Salvage logging** would be conducted on affected areas. Generally, dead, dying, and heavily damaged trees in these stands would be removed to reduce fuel loading conditions and establish conditions conducive to growth of newer, healthier forest stands.
- **Construction of any necessary fuel breaks** (fire control lines) around these areas so wildfires burning into them can be more readily controlled.
- **Prescribe burning** these areas multiple, periodic times over the next ten years on an as needed basis to further reduce fuel-loading conditions.
- **Planting native oak and/or short-leaf pine**, if needed, to replace those that were blowndown. What seed tree sources that remain may be insufficient to reforest damaged areas by natural regeneration. These stand areas would be monitored for the next two years to determine whether or not planting is needed, and a decision made in fall 2006 as to whether or not to plant the damaged areas.
- **Site preparation and release** treatments over the next ten years on an as needed basis to establish and maintain better growing conditions for residual trees in the tornado-damaged areas. Site prep involves using handtools and/or prescribed burning to remove undesirable trees so remaining trees will have less competition for nutrients and water.

Decision to be Made

Whether or not to conduct salvage harvest and restoration-related activities in these specific tornado-damaged stands on the Poplar Bluff Ranger District.

Scoping Period

Comments will be accepted until close of business September 22, 2004

Target Date for Completion of Analysis and a decision

October 2004

Contact Person(s)

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Tornado-damaged Stands
April 24, 2004 Tornado Event
Poplar Bluff Ranger District, Mark Twain National Forest

Compartment 96	Stand #	Acres
	4	23
	10	24
	11	24
	12	38
	13	8
	14	25
	57	9
	61	10
	62	3
	69	9
	71	8
	75	7
	76	9
	13 Stands	Subtotal, 197 acres
Compartment 99	**Stand #**	**Acres**
	20	21
	23	19
	2 Stands	Subtotal, 40 acres
2 Compartments	15 Stands	Totals 237 acres